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# **Do dot coms Add Value: a preliminary study of the market capitalisation of Australian and Indian telecoms and banking sectors**

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## **Abstract**

*E-Business is increasingly reshaping the way businesses operate across the globe. Globally, businesses in the banking and telecoms sectors have been re-engineering their value chains by adopting e-Business presence by means of dot com launches. The second half of the 1990s, however, saw both the rise and subsequent collapse of dot com entities as a major focus of investment interest, with consequent speculation over the viability of this corporate vehicle. The perceived increase in market capitalisation by means of these ventures during the boom period is now not so certain. In this paper, we report the results of a preliminary study which investigated the impact of dot com launches on market capitalisation within the banking and telecoms sectors of Australia and India.*

## **Keywords**

Dot com entities, Market Capitalisation, Telecoms, Banking, Transaction Cost Economics, Catch-up Hypothesis

## **INTRODUCTION**

The e-Business/e-Commerce evolution over the past decade has ushered in changes significant enough to qualify it as a paradigm shift in the way businesses operate across the globe (Amor, 2000; Chan and Swatman, 2000). The concept of e-Business is predicted to become a catalyst for fundamental changes in the structure, operations and management of organisations (Brynjolfsson and Urban, 2001; McNurlin and Sprague, 2002). One of the crucial phases in the growth of e-Business was the dot com boom and fall at the turn of the millennium. In the late 1990s, the growth of Internet created enormous wealth (Rayport and Jaworski, 2001) with the NASDAQ index providing a venue for virtual SMEs and smaller stocks to gain public listing and injection of speculative funds. Following the success of some of these companies, such as Yahoo! that has now become a household name, there was a surge of organisations, especially in the telecoms and banking sectors, adopting an online presence by launching a dot com venture. Technology driven sectors such as telecoms (Turban *et al.*, 2002) and service sectors, where easy digitisation is possible, were the first to adopt e-Business. Towards the end of the 1990s, with the media boosting the growth of e-Business, online company valuations were believed to reflect an organisation's worth (Kalakota and Robinson, 2001). Broadly, the organisations launching dot com subsidiaries expected to increase market capitalisation, which had begun to be perceived as

a measure of profitability (Unnithan and Swatman, 2001a; 2001b). The crash of the overall dot com and IT stock markets, however, have cast doubt on the validity of dot com entities as a viable market form. Dot coms and e-Commerce are inextricably inter-linked, but their business results differ (Cohan, 2002). The focus of this paper is to explore the impact of the dot com launches on the market capitalisation of Australian and Indian Telco and banking stocks. Being among the first to launch dot coms, these sectors were particularly suitable for this preliminary study. The disparate nature of the economies concerned was expected to reveal specific insights relating to the dot com phenomenon. This study is part of a longer-term research investigation which draws together the cascade effect of dot coms on the socio-economic fabric of the economies and sectors in general, as well as on the specific effect of dot coms on market capitalisation of organisations.

## METHODOLOGY

Both positivist and interpretivist philosophies have potential as explanatory foundations for research into Information Systems and e-Business (see for example Mingers, 2001; Nissen *et al.*, 1991; Lee, 1991; Orlikowski and Baroudi, 1991). While *positivism* implies an ordered universe made up of atomistic, discrete and observable events, where social realities are viewed as a complex of causal relations between events depicted as an emerging patchwork of relations between variables; interpretivism implies an ontology in which social reality is the product of processes, and in which social realities are entirely relative to the phenomena under study (Blaikie, 1993). Clarke (2000:2) noted that e-Business research was still in an early stage of development due to the recent emergence of the domain, the rapid changes taking place, substantial variation in behaviour across quite similar domains, and populist media distortion of the terminology and data that this engenders. Given the difficulty of studying a moving target – such as the dot com phenomenon – selecting the positivist approach was a pragmatic decision. The interpretivist approach would have required a far longer and more in-depth investigation, using a greater number of dot coms. In addition, to answer the research question, “are dot coms contributing to the market capitalisation of organisations?” it was necessary to conduct a preliminary quantitative analysis. Only on the basis of the results of a positivist study, could the research proceed further into a more detailed (and perhaps interpretivist) study.

We have made use of a comparatively simple model of market capitalisation determinants for this study. Market capitalisation depends on both the share price itself, and on the number of shares per issue – since, in most cases, the number of shares on issue for a company does not change greatly, changes in the share price generally drive any alteration in market capitalisation. In an efficient market (see for example Fama 1970; 1991), any event which changes the future cash flows of the firm leads to a change in price. It is therefore plausible to argue that launching a dot com may have the effect of modifying the share price of the parent company and thus be worthy of study. Despite the attractiveness of this theory, however, we have not assumed that the launch of a dot com is the sole cause of change in market capitalisation. Rather, the study reported here has hypothesised that dot com launches are **one of** the causes for shifts in market capitalisation. The analysis of the full range of factors affecting share price of the parent company is clearly beyond the scope of this preliminary investigation.

Koop (2000) argues that in cross-disciplinary research areas, such as e-Business, it is difficult to make a complete analysis dependent on statistical modelling. The volatility of the phenomena means that normal statistical tests are more or less indicative, rather than having their former explanatory or predictive power. Over recent years, the *least squares method* has become increasingly popular as a means of studying volatile, indicative and uncertain patterns, especially in the e-Business field (Koop, 2000). In view of the difficulty of testing causation in the e-Business arena, we have made use of this method to create a model to test the hypothesis that dot coms may create positive market capitalisation for the organisations which launch them. To add further depth to the results, we have also made use of the theory of *transaction cost economics* (Williamson and Winter, 1993; Pant and Hsu, 1996), which broadly suggests that the overall transaction costs of an organisation can be reduced through e-Business (particularly, in this instance, the launch of a dot com entity). We have also analysed our results more generally from the economic perspective of the

*catch-up hypothesis* (Abramovitz, 1989), which suggests that certain economies tend to catch-up with apparently stronger nations, while others forge-ahead or fall behind, depending on the momentum of e-Business growth (again indicated through dot com launches).

While this paper spans the boundary between Information Systems and finance research, it is of particular relevance to the IS community for two major reasons:

- Firstly, IS is a discipline which integrates business and technology and researchers in this field have a legitimate need to understand the implications of dot com growth at all levels;
- Secondly, as Clarke and Neill (2001) argue, the IS research and business communities will gain real benefit from studying the effects of the transition from netphase I (1996-2000) to netphase II (after 2000). The early, experimentation phase really set the stage for sustained growth in Internet-based business, despite the fundamental mistakes made in identifying likely e-Business models. As major newspapers begin to report signs of a tentative recovery in dot com growth and profitability (see for example 'The Australian', 2002), it is crucial to understand the dot com phenomenon as more than merely a new marketing channel – especially given the growing momentum in the B2B sector (Clarke and Neill, 2001).

## SAMPLE SELECTION

The primary concern in selecting a sample was that it should be taken from the relevant sectors and economies under investigation. Accordingly, a sample of three organisations in Australia and India, in each of the banking and telecommunication sectors (that is, 12 organisations in total) was selected, based on the following two basic criteria. The organisation (a) must be listed on the stock exchange (b) have launched a dot com entity during the period under investigation.

Australia		India	
Telco	Dot com launch	Telco	Dot com launch
Telstra	telstra.com	VSNL	VSNL.com
Optus	optus.com.au	MTNL	Mtnl.net.in
One.Tel	onetel.com.au	Satyam Infoway Limited	Sify.com
Bank	Dot com launch	Bank	Dot com launch
ANZ	anz.com.au	ICICI Bank	icicibank.com
National Australia Bank	nab.com.au	State Bank of India	sbi.co.in
Commonwealth Bank	combank.com.au	HDFC Bank	hdfc.co.in

Table 1: Details of Organisations and dot com entities

In addition, the organisations had to fit within the following broad parameters: (a) Large size (number of employees, production volume, contribution to GDP etc) as compared to the other organisations within the sector, but must not necessarily be the largest in their sector; (b) Visibility in terms of recall of the corporate brand, perceived importance in the economy, media presence and global visibility, if applicable; and (c) Comparability - across economies and within the relevant sector. For each company selected, the market capitalisation data used for the analysis were drawn from the DataStream database (Datastream DDE Server, 1997). The categorisations of the sector were drawn from the Australian Bureau of Statistics and the Indian Statistical Institute.

## THE MODEL

A statistical study, based on the least squares method, was conducted to determine if there was a relationship between the market capitalisation of organisations in the telecoms and banking sectors and their dot com launches. The analysis sought to establish whether there is a variation in the market capitalisation of the organisations under investigation, following the launch of a dot com entity. More specifically, the model investigated whether there is (a) an immediate change in rate of growth, after the date on which the organization launched a

dot com division or entity, (b) a long-term incremental change in the market capitalisation and, if so, and (c) whether the long term incremental change in market capitalisation was negative or positive. The period of analysis is a comparatively short one of only 2 years. This means that the analysis was undertaken over a period of essentially one year before the dot com launches and one year afterward. Given the “efficient markets” hypothesis (for details see Fama, 1970; 1991) one could expect any stock market consequences to occur rapidly. The model used for the analysis of market capitalisation is:  $SIZE_{it} = \beta_{0i} + DA \beta_{1i} + \beta_{2i} Trend + \beta_{3i} DA Trend + \epsilon_{it}$  (1): Where  $Size_{it}$  is the market capitalisation of company  $i$  in period  $t$ ;  $Trend$  is a linear time period (which increments each period);  $DA$  is a dummy variable which takes the value of 0 before the company launched a dot com and 1 after the company launched a dot com;  $\beta_{0i}$ ,  $\beta_{1i}$ ,  $\beta_{2i}$ ,  $\beta_{3i}$  are unknown company specific parameters to be estimated; and  $\epsilon_{it}$  is assumed to be  $N(0, \sigma^2_i)$ .

The results are interpreted for two major factors: Statistical Significance: To be statistically significant, the  $p$  value of each of the resultant variables should be a small number, i.e., less than 0.050. The positive  $\beta_{2i}$  values would indicate a healthy rate of growth in market capitalisation before launching the dot com, and negative values indicate poor growth rates prior to the dot com launch. A positive  $\beta_{1i}$  indicates an immediate rise in the rate of market capitalisation growth; and a negative value indicates a falling rate of market capitalisation, immediately after the dot com launch. Subsequently, positive  $\beta_{3i}$  values indicate an increasing rate of growth in market capitalisation, and negative values indicate a decreasing rate of growth after the dot com launch. The statistical significance is interpreted without taking account of any other variables, which may or may not affect market capitalisation. Magnitude: The magnitude of the results was interpreted according to the number of statistically significant, positive and negative results, on a economy-wide and sector specific basis. If the results indicated strong statistical significance and positive results, the magnitude of dot com launches was perceived to be higher for that economy and in that specific sector. Specifically, dot coms would be perceived as good indicators of increasing market capitalisation, in that country, and in that sector. Similarly, a higher number of statistically insignificant and negative results would mean that dot com launches are either insignificant or negative for the market capitalisation growth of organisations in that country and that sector. Again, the magnitude of the effect was estimated without taking into account any other factor which might directly or indirectly affect market capitalisation. Only the perceived effect of dot com launches was considered.

## RESULTS

In this section, the estimated model is applied to each of the sectors, and the results are provided. A graphical representation of two organisations, selected at random, is followed by a summary of the analysis, in a tabular form. A brief discussion follows the two representations, explaining the results.

### The Telecoms Sector

The trend graphs (Figures 1 and 2) represent the dot com impact on market capitalisation for two telcos, Telstra (Australia) and VSNL (India), from the telecoms sector sample. The fitted line represents the changes in market capitalisation before and after dot com launch.

The results of analysing the telecoms sector sample are reported in tabular form in table 2. The selected telecoms organisations within each economy are given in the first column. The table reports least squares parameter estimates,  $p$  values in parenthesis and the last column provides adjusted  $R^2$ . As discussed previously,  $\beta_{1i}$  reports the immediate change in market capitalisation following dot com launch,  $\beta_{2i}$  reports the trend growth in market capitalisation before the dot com launch and  $\beta_{3i}$  reports the trend growth after the dot com launch.

The  $p$  value of  $\beta_{2i}$  (the rate of market capitalisation growth before launching the dot com) was indicated as statistically significant only for one organisation out of three investigated, for each of the two economies studied. For Australia, the value of  $\beta_{2i}$  ranged from 18.501 to 2753.446. However, only Optus with a  $\beta_{2i}$  value of 1374.988 had a significant  $p$  value of 0.000. Similarly, for India, the  $\beta_{2i}$  values ranged between 131.491 and -1076.258, and only MTNL indicated a significant  $\beta_{2i}$  of 131.491 with a  $p$  value of 0.000. This suggested that

market capitalisation growth was significant for only a single organisation, per economy, prior to the dot com launches. The  $\beta_{1i}$  values (reflecting an immediate shift in market capitalisation after the dot com launches) ranged from -4597.954 to 89801.90 for the Australian organisations, but only Optus, with a value of 89801.90, had a significant p value. Therefore, the market capitalisation growth trend was significant only for one organisation in Australia, immediately after the dot com launch. The  $\beta_{1i}$  ranged between -165801.1 and -242478.0, with significant p values, for Indian organisations. Therefore, the immediate effect of dot com launch launches was significant and negative for Indian organisations. The  $\beta_{3i}$  value (reflecting long term incremental change in market capitalisation after the dot com launches) of Australian organisations ranged between 166.625 and -3653.930 and only one organisation (Optus) out of the three investigated reflected a statistically significant p value. In contrast, values ranging from 5855.64 to 8478.399 indicated high statistical significance for the three Indian organisations. Therefore, the suggestion is that the effect of dot com launches was significant for Indian organisations, but insignificant for Australian organisations, in the longer term.

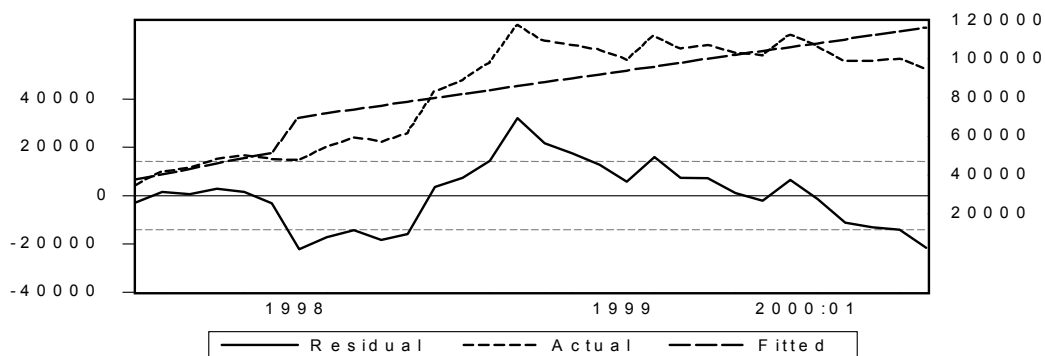


Figure 1: Impact of dot com on Market Capitalisation – Telstra

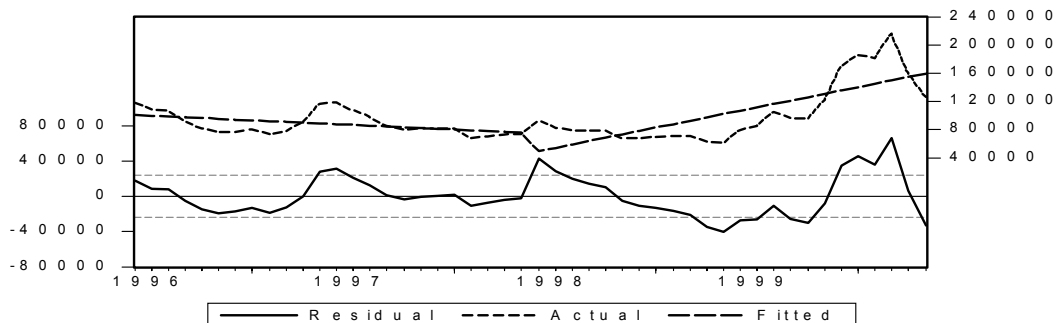


Figure 2: Impact of dot coms on Market capitalisation – VSNL

Company/ Economy	$\beta_{2i}$	$\beta_{1i}$	$\beta_{3i}$	Adjusted R <sup>2</sup>
ONETEL/ Australia	18.501 (0.877)	-4597.954 (0.078)	166.625 (0.177)	0.875
TELSTRA/ Australia	2753.446 (0.424)	33228.24 (0.645)	-733.295 (0.831)	0.726
OPTUS/ Australia	1374.988 (0.000)	89801.90 (0.000)	-3653.930 (0.000)	0.439
Satyam/ India	304.699 (0.747)	-242478.0 (0.000)	8478.399 (0.000)	0.741
VSNL/ India	-1076.258	-165801.1	5855.64	

Company/ Economy	$\beta_{2i}$	$\beta_{1i}$	$\beta_{3i}$	Adjusted R <sup>2</sup>
	(0.133)	(0.000)	(0.000)	0.520
MTNL/ India	131.491 (0.000)	-228922.5 (0.000)	8074.456 (0.000)	0.753

Table 2: Results of telecoms sector organisations' analysis

For the Australian companies under investigation, therefore, the immediate and overall growth trend of market capitalisation over a period of time was statistically insignificant (or rather, negative) for the dot com launches. However, these figures need to be considered in a little more depth. Telstra is the former PTT, once 100% government owned, and gradually being sold off, as competition in the Australian telecoms sector becomes a reality. Optus was the first, and still the most significant, challenger to Telstra's overwhelming market dominance – and is itself a powerful firm, being a conglomerate with a majority holding by Cable & Wireless. OneTel was a comparatively small and 'cheeky' newcomer, offering innovative services and without the solid financial backing of the other two firms. The positive growth in market capitalisation for Optus, before and immediately after the dot com launch suggests that this company was viewed rather differently from either of the other two organisations studied. It appears, based on these figures, that Optus was seen as a significant competitor to Telstra and also that it was seen as an innovator and potential market maker – although its failure to grow market share in the longer-term indicates that its image was not strong enough to overcome the general apathy towards telecoms-based dot coms. One.Tel appears to have been not taken very seriously by the market place as anything other than a re-seller of bandwidth and valued accordingly; and Telstra was not viewed as sufficiently market-oriented, despite its partial sell-off by the government.

All the organisations in India had statistically significant p values in their results after the dot com launches, but only one organisation (MTNL) had a statistically significant  $\beta_{2i}$  before the dot com launch. The results were not always positive immediately after the launching of a dot com subsidiary (represented by  $\beta_{1i}$ ), but were consistently positive over the longer term (as indicated by  $\beta_{3i}$ ). Therefore, in the case of the Indian organisations, the overall growth trend of market capitalisation before the dot com was insignificant or negative, but was significantly positive after the dot com launches for all organisations. These results run entirely counter to the Australian experience and require both further discussion and further research to enable understanding. One possible explanation lies in the enthusiastic uptake of the high-tech sector by Indian organisations and individuals. A telco, which launched a dot com, would thus be considered more innovative; and might well be more attractive to the share-buying public.

### Banking Sector

The trend graphs (Figures 3 and 4) represent the dot com impact on market capitalisation for two banks, ANZ (Australia) and ICICI (India), from the banking sector sample. The fitted line represents the changes in market capitalisation before and after dot com launch.

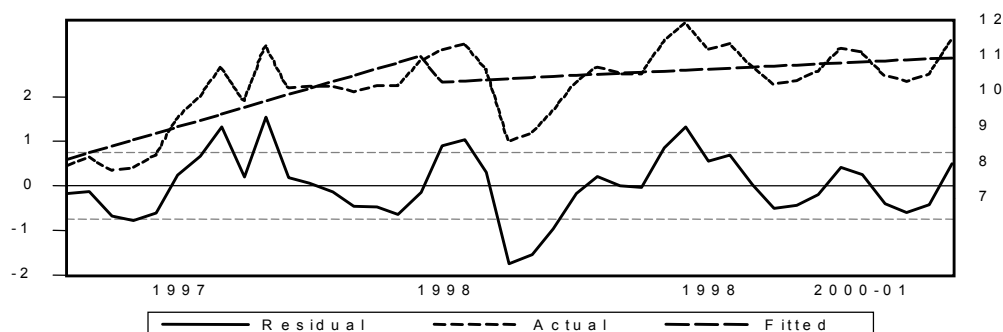


Figure 3: Dot com impact on market capitalisation – ANZ bank

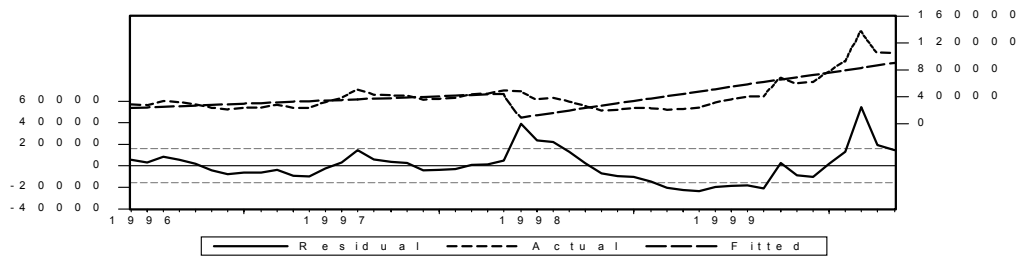


Figure 4: Dot com impact on market capitalisation – ICICI bank

The results of the analysis of the banking sector are reported in Table 3. The selected organisations within each economy are given in the first column. The table reports least squares parameter estimates, p values in parenthesis and the last column provides adjusted  $R^2$ . As discussed previously,  $\beta_{1i}$  reports the immediate change in market capitalisation following dot com launch,  $\beta_{2i}$  reports the trend growth in market capitalisation before the dot com launch and  $\beta_{3i}$  reports the trend growth after the dot com launch.

Company	$\beta_{2i}$	$\beta_{1i}$	$\beta_{3i}$	Adjusted $R^2$
NAB/ Australia	0.406 (0.000)	10.137 (0.000)	-0.384 (0.001)	0.656
ANZ/ Australia	0.180 (0.000)	2.725 (0.008)	-0.151 (0.001)	0.516
COM/ Australia	0.443 (0.000)	3.591 (0.057)	-0.138 (0.091)	0.910
SBI/ India	765.710 (0.170)	-66786.52 (0.002)	469.421 (0.548)	0.452
HDFC/ India	444.182 (0.013)	-41219.88 (0.000)	1122.521 (0.000)	0.713
ICICI/ India	919.785 (0.054)	-98601.18 (0.000)	2599.383 (0.000)	0.597

Table 3: Results of banking sector organisations' analysis

For Australia the value of  $\beta_{2i}$  (the rate of market capitalisation growth before launching the dot com) ranged between 0.180 and 0.406, with significant p values. The p value of  $\beta_{2i}$  ranged between 444.182 and 919.785 with statistically insignificant p values for Indian banks. Therefore, the trend of growth in market capitalisation was statistically significant for all Australian banks before the dot com launches, but was insignificant for Indian banks during the same period. The  $\beta_{1i}$  (reflecting immediate shift in market capitalisation after the dot com launches) ranged between 2.725 and 10.137 in Australian banks, with two banks reflecting significant p values. Therefore, the immediate effect of the dot com launches was relatively significant for Australian banks. The  $\beta_{1i}$  values ranged between -41219.88 and -98601.18 for Indian banks, with 2 out of 3 banks reflecting significant p values. Therefore, the immediate change in market capitalisation growth was significant for Indian banks.  $\beta_{3i}$  (reflecting the long term incremental change in market capitalisation after the dot com launches) ranged between -0.151 and -0.384 for Australian banks, with two of them reflecting significant p values. For Indian banks, the values ranged between 469.421 and 2599.383 and 2 of the 3 banks investigated reflected significant p values. Therefore, the effect of dot com launches was significant for both Australian banks and for Indian banks in the long term.

For the Australian banks under investigation, therefore, the pre dot com growth rate in market capitalisation was relatively small but positive. However, the immediate change and longer-term growth in market capitalisation, was generally negative with dot com launches. Australian banks have long been regarded as sound, 'blue chip' investments. The pre-dot



com market capitalisation figures are therefore hardly surprising. What is more surprising is that the launch of a dot com subsidiary appears to have been actually harmful to the market capitalisation potential of, particularly, the two major private banks, which may have suffered from a perception that they were engaging in speculative behaviour not considered suitable for a bank. Two of the banks in India had statistically insignificant p values in their results before the dot com launches, while two of the three banks reflected significantly positive results after the dot com launches. The results were found to be negative immediately after dot com (represented by  $\beta_{1i}$ ) launches, but were found to be consistently positive over the longer term (as indicated by  $\beta_{3i}$ ). Therefore, with the Indian banks, the overall growth trend of market capitalisation, before the dot com was insignificant, the immediate shift in market capitalisation was negative or insignificant, but was significantly positive after dot com launches. The dot com launches thus indicated a positive market capitalisation effect for Indian banks, but were negative for the market capitalisation growth of Australian banks. India, once again, has shown an entirely different trend in market capitalisation from that experienced by Australian banks. It would appear that the launch of the dot coms by both the telecoms and banking sectors has made those organisations involved more attractive to the share-buying Indian public. The insignificant growth in market capitalisation prior to the dot com launches would suggest that banks were not originally seen as very attractive investment vehicles (unlike the Australian experience), but became more attractive once their behaviour suggested a greater interest in the New Economy.

## DISCUSSION

The dot com effect has been rather negative for Australian organisations in both sectors. Despite this fact, organisations in both the telecoms and banking sectors seem to continue launching dot coms, and becoming involving in dot com activity, such as extending their supply chains by means of their dot com subsidiaries. This remains very intriguing because it suggests that large organisations were relatively unaffected by changes in the share-buying publics' attitudes. By contrast, Indian organisations seem to be capitalising on the dot com activity in a very positive way. Although the results of the quantitative analysis are so very disparate, the strategy of the organisations overall in both economies seems to be the same (or at least very similar). This leads to analysis of the results from two theoretical perspectives, i.e. transaction cost theory from the organisations' perspective, and catch-up hypothesis from an economic perspective.

### Transaction Cost Economics

Transaction cost theory suggests that overall transaction costs that are higher in unstructured markets (Pant and Hsu, 1996) are reduced by the introduction of web-based business. The following paragraphs illustrate the application of this theory to the rationale behind dot com launches in the two economies under investigation (see also Unnithan and Swatman, 2001a; 2001b). The first transaction cost is that of **bounded rationality**, which refers to the fact that human beings have limited information storage, retrieval and processing capacity. This adds transaction costs to the organisation. Web based businesses can use the global facilities of information storage, retrieval through powerful search engines, and accessibility across the organisation and virtual linkages to other organisations, extending the value chain, without incurring additional costs. The overall effect of these abilities is that online business not only reduces direct transaction costs, but also facilitates an informed decision-making process, indirectly helping to reduce costs still further. The Indian organisations seem to have taken full advantage of the benefits the web has to offer, eliminating the expensive systems that were used by the industrialised nations before the spread of the Internet and the Web. For example, instead of adopting VAN-based EDI-based systems for transactions, Indian organisations have been able to move directly to Web-based EDI systems, harnessing the power of the web and eliminating high transaction costs. By contrast, Australian organisations had already developed and established systems that were not very cost-effective, but were necessary before the Web. These systems were already in place, and migration to web-based but more cost-effective systems is much harder for organisations that have already sunk millions of dollars into legacy systems. However, the organisations investigated seem to be optimistic about their future and,

following the principle of network economics<sup>1</sup>, they seem to be taking up the challenge of launching dot coms, although the results may show up later than they initially hoped.

The second transaction cost, **opportunism**, refers to the way in which information is distorted when reaching the consumer. For example, when creating an advertising promotional video, the cost of advertising on television to reach and convince a large and heterogeneous audience in a mere 30 seconds is very high, and the information needs to be filtered in many ways. With the burgeoning growth of e-Business, it has more or less become necessary to become 'net certified' (Pant and Hsu, 1996) to become profitable. This essentially means that consumers have the opportunity to compare your products and services with those of other suppliers, and essentially provide feedback, on the basis of which the business needs to customise its offerings. Customers are making more and more informed choices, through discussion groups on the Internet, and through the ability to research for themselves worldwide. Interestingly, the organisation, by going online, is becoming 'net certified', enabling evaluation and feedback by consumers, but not incurring the costs of opportunism. Both Australian and Indian organisations are increasingly becoming aware that they need to be 'net certified' to remain profitable in business. This is driven by the growth of 'informed customers' in India, and the growing demands of the younger generation in Australia. Evidently, both sets of organisations seem to be using dot coms to cut down these transaction costs. It is possible that Australia's smaller population is slowing the reaping of benefits from lower transaction costs – but it is equally possible that high margins have prevented consumers from gaining the benefits of lower transaction costs as yet. If so, this could provide a further reason for the puzzling lack of enthusiasm by the Australian population for dot com launches by large and well-known organisations in the telecoms and banking sectors.

**Market uncertainty** is a transaction cost closely associated with opportunism. This is the cost involved in market research, the costs of which could be reduced considerably through online surveys. In addition, in providing an option like 'design your own' to the consumer, the organisation is gathering consumer preferences in an indirect manner. The costs involved in market research are usually very high for organisations, especially with the market becoming increasingly globalised. Not only do organisations need to benchmark against existing national brands, but increasingly against international brands. Against this, however, is the fact that Internet-based market research is considerably cheaper than the forms of focus group-based market research which were the predominant model prior to the Web. Organisations have thus both gained and suffered from the introduction of online business, in terms of market uncertainty. In addition, with the movement of people across the globe, organisations need to cater to non-resident customers as well to their local customers. The online surveys facilitated through online ventures seem to be keeping the cost of market surveys down in organisations within both economies. The high population volume in India and the long distances in Australia both attract high transaction costs in the area of market research. The organisations therefore tend to benefit in the long run in both economies.

**Asset specificity** is a transaction cost associated with the Web which is changing the business scenario from competition to collaboration. With the emergence of web based EDI, for example, organisations are moving from set suppliers who used to provide competitive pricing terms, to suppliers who may be able to work with electronic commerce systems. The move is towards standardisation and, in the long run, this tends to reduce overall transaction costs for all collaborators. Also, the advent of virtual teams which share knowledge and resources, and the use of the WWW as a shared testing platform reduce costs for the organisation. In both Australia and India, organisations seem to be moving towards collaboration to reduce transaction costs, and online ventures do facilitate this strategy. The organisations in Australia, although not immediately gaining by 'increased or significant' rises in market capitalisation, are perhaps expecting an overall reduction in transaction costs in the long run. It has become essential to offer an online market channel to keep all opportunities open for the consumer. By contrast, Indian organisations are capitalising on the low transaction costs offered by the WWW, by directly taking up online systems. In

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<sup>1</sup> Network economics is a theory referring to the phenomenon that the value of any product or service increases with the number of users adopting it.

addition, the increasing market capitalisation, as evidenced by the results of our quantitative analysis, is essentially supported and boosted by the aura of innovation associated with online activities, created by the media.

### **The Catch-up Hypothesis**

The catch-up, forge-ahead, fall behind theory, developed by Abramovitz (1989), argues that some economies try to catch-up with others, while others fall behind or forge ahead, depending on the attitude of the population in general. The theory suggests that less developed economies have greater potential to catch-up with leading economies because of their ability to adopt leading-edge technology directly, while developed countries get bogged down with legacy systems which are too expensive or too difficult to replace. Application of this theory provided insights from an economic perspective, to our analysis. Developed economies, such as Australia, would find it more difficult to migrate from their existing systems to newer ones (see Unnithan and Swatman, 2001a; 2001b). This may be due to the fact that the costs and other variables associated with migrating from one system to the other, including changes in public attitude, could be prove difficult. A change driven by mass public attitude is more likely to have a 'forge ahead' effect on the economy.

Considering the banking and telecoms sectors, Australia is a country with an Internet-ready infrastructure in terms of telecommunications, secure protocols, PC penetration, and consumer literacy. In Australia the four major banks have largely controlled the banking sector (we considered 3 of the 4 major banks in our analysis). Despite its strong basis as an e-Banking centre, Australia is, however, at risk of falling behind its Asian neighbours in the rush to provide effective, appealing solutions for the X and Y generations. This is perhaps due to the reluctance of banks themselves to pass on transaction cost savings to the consumers, diminishing positive investor sentiment. In the telecoms sector, there is almost a complete take-up of telecom technologies in the Australian market, especially the most recent technologies such as mobile communications. The major telcos seem to be setting the stage to 'forge ahead' with their new e-Business technologies and innovation, including dot com launches. Innovation and customised solutions by both the sectors, rather than dot com launches themselves, may help the economy in forging ahead against its developed competitor economies.

India by comparison, is plagued by weak infrastructure, low PC penetration, developing security protocols and uneven consumer literacy spread. Although many banks have offered e-Banking services, the slow pace will continue until a critical mass is achieved for PC penetration, Internet connectivity and fixed telephone uptake. In the telecoms sector, the growth of broadband and DSL are encouraging. The upsurge of IT professionals with growing demands is putting pressure on the government to develop new initiatives for a faster spread of telecom technologies. The uptake of broadband and DSL seem to reflect this enthusiasm. The government is sensitive to the general public demand for innovation, spread of technology and cost effectiveness. Dot com launches are seen as innovative measures by the public, and the organisations in the banking and telecoms sectors are capitalising on this sentiment, to drive the 'catching up' of the economy. The transaction cost and 'catch-up, forge-ahead, fall-behind' theories seem to highlight the fact that most organisations are going online to decrease their overall transaction costs and, thus, increase their profit margins. Increase in market capitalisation, which may initially indicate either a positive or negative result, may not be the only underlying motive for businesses to go online, as the experiences of the organisations investigated seem to indicate.

### **CONCLUSIONS**

Our pilot study of dot coms in two disparate economies suggests that is considerable opportunity for dynamic organisations to capitalise on the opportunities offered by e-Business (in this context, through dot com launches). The paper highlighted the fact that the launching of dot com entities may have beneficial effects on long-term transaction costs for banks and telcos, although the activity may or may not have had significant short term impact on market capitalisation. It also appears that mass attitude is another critical variable in the dot com success. In Australia, particularly in the banking sector, dot com entities seem to have had a negative impact, at least initially. The share buying public seem to view this as

a frivolous activity by banks, rather than as an innovation. Similarly, with the telcos, the public seem relatively sceptical about small telcos which launch on the stock exchange. Share buyers consider the telecoms sector itself less attractive for quick profits, especially after the downturns in the IT and NASDAQ sectors of the stock market.

By contrast, Indian banks and telcos seem to be increasing their market capitalisation through dot coms. The share buying public is driven by the innovation aura surrounding dot com launches, despite the downturn. The mass attitude is essentially to catch-up with developed economies. The media has a huge effect on public attitudes in India and, therefore, the media hype surrounding e-Business activities such as dot com launches, is driven by the initial euphoria of 'catching up' – and not as yet dampened by the downturn in the economy. Banks and telcos, which launched dot coms, are seen as innovative icons. This attitude seems to be reflected in our analysis, which indicates the increase in market capitalisation after dot com launches by organisations. Although the results of this analysis, which is preliminary and indicative, suggests disparate results for the two economies and sectors it is clear that winners in both economies will be far-sighted, innovative organisations, which will balance consumer attitudes with the opportunities offered by e-Business, such as using dot com launches as an alternative channel to offer innovative, cost effective and sustained solutions.

## FUTURE RESEARCH DIRECTIONS

The research project reported in this paper is clearly indicative in nature, although it provides much food for thought. This preliminary research study could provide a more explanatory and/ or predictive result if it were to be extended to include a larger number of economies, sectors and a larger sample size. The time span could also be increased to more than 2 years, as most of dot com launches are now about 4 years old. Studies can be grouped into patterns offering similar growth patterns. Sectors within economies may be reflecting different sentiments and there is a possibility of increasing the scope of the project to form generalisations across different continents. At present we have based our research upon two very disparate economies (one a classic "industrialised" nation with a small, well-educated population, and the other a rapidly growing developing economy with a huge population demonstrating a wide range of educational opportunities. Comparing like with like will certainly provide a much wider explanatory power than was possible from a pilot study, which is all this research project hoped to be.

With a larger sample size, it would also be possible to study the risk and return-based in-depth analysis of dot com launches, over a particular time period. At present we have been able to consider dot com launches only a combined total – but it seems likely that the launches themselves provided a more diverse range of opportunities than we were able to investigate. In essence, then, this paper has provided a review of a preliminary and indicative piece of work, but one which suggests intriguing possibilities. Those pundits who suggested in the last years of the previous century that e-Business was dead, because the NASDAQ grew too fast and burned too hot, have already been shown to have spoken too soon. What is needed now is a thorough, in-depth analysis of the dot com phenomenon across a wide range of countries, sectors, organisations and time periods to provide a solid empirical grounding for explanation.

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